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(54) PRODUCTION OF 5-AMINOLEVULINIC ACID

(57) Abstract:

PURPOSE: To industrially and advantageously obtain the compound useful as a raw material for various chemicals by photooxidizing an N-protected furfurylamine to give a reaction product, without isolation, reducing the reaction product as it is and hydrolyzing. CONSTITUTION: A furfurylamine of formula I (R1 and R2 are each an amino- protecting group such as acyl) is reacted with molecular oxygen which is produced by light irradiation in the presence of a sensitizer such as rose bengal in a solvent such as pyridine by using a tungstenhalogen lamp to give a reaction mixture containing an oxidation product of formula II (R3 is H or an alkyl). The solution of the mixture as it is hydrogenated in the presence of a catalyst such as a Pd-based or a Ni-based

$$\frac{R^{1}}{R^{2}}$$
 \rightarrow 0

catalyst to provide a reduction product containing a hydride of formula III. Then the catalyst is removed by filtration, the solvent is distilled away, the prepared solid is hydrolyzed as it is or preferably by using an acid such as acetic acid to give the objective compound (salt) of formula IV. The compound is useful as an intermediate for producing hem, vitamin B12,